



PATENT  
Docket No. 24171.0111

## CLAIMS

26. (New) An energized fluid prepared with an electrostatic device, wherein the energized fluid can bear a negative charge for a period of at least one day after being formed by the electrostatic device and wherein the electrostatic device comprises:

a fluid conduit;

a voltage spike signal generator for generating at least one voltage spike signal;

at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and

at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different Rf signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

27. (New) The energized fluid of Claim 26 wherein the energized fluid is derived from a source fluid comprising at least one of water, a water based solution, and an organic solution.

28. (New) The energized fluid of Claim 26 wherein the energized fluid is selected from the group consisting of water, juice, soda, pharmaceutical liquid formulation, gasoline, oil, nutritional drink, liquid dietary supplement, beverage, pesticide concentrate, and herbicide concentrate.

29. (New) The energized fluid of Claim 26, wherein the energized fluid can provide one or more of the following benefits:

- increase milk production in dairy cattle;
- increase meat production in cattle;
- increase meat production in animals including poultry, cattle and swine;
- improve crop yield;
- improve pest resistance in crops;
- improve overall crop health;
- improve crop grass growth and overall condition;
- improve crop productivity;
- improve overall animal health;
- improve animals' resistance to disease and infection;
- increase growth rates and production rates in plants and animals;
- improve plant drought tolerance;
- reduce perceived bitterness in beverages;
- reduce scale formation and build up in fluid conduits;
- enhance flavor in drinks using syrups or concentrates thereby reducing the amount of syrup or concentrate required to provide an acceptable flavor;

reduce the drying time for at least one of concrete and cement;  
increase efficacy of at least one of a fertilizer, nutrient, herbicide, or pesticide for plants;  
improve leaching of salts from upper soil into subsoil;  
control algae;  
control or killing of bacteria; and  
enhance the efficacy of pharmaceutical or neutraceutical solutions.

30. (New) A method of increasing milk production in dairy cattle comprising the steps of:  
treating a water-containing source fluid with the an electrostatic device according to form an energized fluid; and  
administering to dairy cattle an effective amount of the energized fluid for a period of time sufficient to increase milk production in the dairy cattle by at least 5% by volume with respect to milk production achieved by administering the source fluid to the dairy cattle;  
wherein the electrostatic device comprises:  
a fluid conduit;  
a voltage spike signal generator for generating at least one voltage spike signal;  
at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and  
at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;
- wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different Rf signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

31. (New) A method of increasing the octane rating in gasoline comprising the steps of treating a source gasoline with an electrostatic device for a period of time sufficient to form an energized gasoline having a final octane rating that is at least 5% greater than the octane rating of the source gasoline and wherein the electrostatic device comprises:

a fluid conduit;  
a voltage spike signal generator for generating at least one voltage spike signal;  
at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and  
at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different Rf signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

32. (New) A method of preparing cement having a reduced drying time comprising the steps of:

treating a source water with an electrostatic device to form an energized water; and mixing the energized water with a mixture to form a wet mass of cement having a drying time that is at least 40% shorter than a corresponding mass of cement made with the source water;

wherein the electrostatic device comprises:

a fluid conduit;  
a voltage spike signal generator for generating at least one voltage spike signal;  
at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and  
at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different Rf signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

33. (New) A method of increasing meat production in at least one of poultry, swine, and cattle comprising the step of:

treating a water-containing source fluid with an electrostatic device to form an energized fluid; and

administering to the at least one of poultry, swine, and cattle an effective amount of the energized fluid for a period of time sufficient to provide at least one of poultry, swine and cattle having a meat mass which is greater than a meat mass of poultry, swine, and cattle, respectively, being administered the source fluid;

wherein the electrostatic device comprises:

a fluid conduit;

a voltage spike signal generator for generating at least one voltage spike signal;

at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and

at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different Rf signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

34. (New) A method of increasing a nutrition value of a feed grass comprising the steps of:

treating a water-containing source fluid with an electrostatic device to form an energized water-containing fluid; and

administering to the feed grass an effective amount of the energized water based fluid for a period of time sufficient to form an improved feed grass having a nutritional component present in a first amount which is greater than a corresponding second amount in the feed grass that has been treated with the water-containing source fluid;

wherein the electrostatic device comprises:

a fluid conduit;

a voltage spike signal generator for generating at least one voltage spike signal;

at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and

at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different Rf signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

35. (New) A method of Claim 34 wherein the feed grasses are selected from a group consisting of:

Rhodes grass, alfalfa, lawn grass, sod grass, barley, wheat, rye, Saint Augustine grass, tiff green grass, Bermuda grass, Clover grass, Johnson grass, San Love grass, bluegrass, blue stem grass, Gramma Green grass, buffalo grass, clover grass, prairie grass, hay, and dichondra grass.

36. (New) A method of increasing crop production comprising the step of:  
treating a water-containing source fluid with an electrostatic device to form an water-containing energized fluid; and  
treating a crop with an effective amount of the energized fluid for a period of time sufficient to increase a production of the crop with respect to a corresponding production which would be obtained by treating the crop with the source fluid;  
wherein the electrostatic device comprises:  
a fluid conduit;  
a voltage spike signal generator for generating at least one voltage spike signal;  
at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and  
at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;  
wherein:  
the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different Rf signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

37. (New) The method of Claim 36 wherein the crop is selected from the group consisting of:

wheat, barley, tomatoes, peppers, cauliflower, broccoli, strawberries, lettuce, onion, cabbage, melons, grapes, dates, citrus fruits, potatoes, corn, peanuts, lettuce, squash, fruit tree crop, and fruit bush crop.

38. (New) A method of producing an energized beverage having reduced beverage concentrate comprising the steps of:

treating a source water with an electrostatic device to form an energized water;

treating a source beverage concentrate with the electrostatic device to form an energized beverage concentrate; and

mixing the energized water and the energized beverage concentrate to form an energized beverage;

wherein the energized beverage requires less beverage concentrate to perform substantially the same as a corresponding unenergized beverage in a taste test; and

wherein the electrostatic device comprises:

a fluid conduit;

a voltage spike signal generator for generating at least one voltage spike signal;

at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and

at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different RF signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

39. (New) An improved method of combusing a fluid comprising the steps of:

treating a source fluid with an electrostatic device to form an energized fluid; and  
combusting the energized fluid in a stack;

wherein combustion of the energized fluid results in at least one of a lower carbon dioxide emission level, a lower smoke emission level, a lower required stack temperature, and improved flame performance as compared to combustion of the source fluid in the stack; and

wherein the electrostatic device comprises:

a fluid conduit;  
a voltage spike signal generator for generating at least one voltage spike signal;  
at least first and second radio frequency RF signal generators for generating at least two different RF signals having controlled frequencies; and  
at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different RF

signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

40. (New) A method of tracking a fluid flowing through a fluid conduit comprising the steps of:

treating a fluid flowing through a first point of a fluid conduit with an electrostatic device to energize the fluid; and

monitoring a property of the fluid at a downstream second point of the fluid conduit to determine whether the fluid has been energized;

wherein a change in the property corresponds substantially with a change in energy of the fluid; and

wherein the electrostatic device comprises:

a fluid conduit;

a voltage spike signal generator for generating at least one voltage spike signal;

at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and

at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different Rf

signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.

41. (New) An improve method of producing shrimp comprising the steps of:  
treating a salt water source with an electrostatic device to form energized salt water;  
and

treating a first group of shrimp with an effective amount of the energized salt water for a period of time sufficient to at least one of increase the production of, increase the survival rate of, reduce the feed requirement of and reduce the time-to-market of the first group of shrimp as compared to a substantially similar second group of shrimp not treated with the energized salt water;

wherein the electrostatic device comprises:

a fluid conduit;  
a voltage spike signal generator for generating at least one voltage spike signal;  
at least first and second radio frequency Rf signal generators for generating at least two different Rf signals having controlled frequencies; and  
at least one antenna disposed in the fluid conduit for generating at least two different RF signals having controlled frequencies;

wherein:

the at least one antenna emits into a source fluid in the fluid conduit a combination signal comprising the at least one voltage spike signal and the at least two different RF signals to form an energized fluid which can provide a measurable benefit to at least one of a living organism machinery, equipment, process and substance.